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ENVIRONMENTAL ASSESSMENT BOARD



ONTARIO HYDRO DEMAND/SUPPLY PLAN HEARINGS

VOLUME: 114

DATE: Wednesday, February 26, 1992

BEFORE:

HON. MR. JUSTICE E. SAUNDERS	Chairman
DR. G. CONNELL	Member
MS. G. PATTERSON	Member

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ENVIRONMENTAL ASSESSMENT BOARD
ONTARIO HYDRO DEMAND/SUPPLY PLAN HEARING

IN THE MATTER OF the Environmental Assessment Act,
R.S.O. 1980, c. 140, as amended, and Regulations
thereunder;

AND IN THE MATTER OF an undertaking by Ontario Hydro
consisting of a program in respect of activities
associated with meeting future electricity
requirements in Ontario.

Held on the 5th Floor, 2200
Yonge Street, Toronto, Ontario,
on Wednesday, the 26th day of February,
1992, commencing at 10:00 a.m.

VOLUME 114

B E F O R E :

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MS. G. PATTERSON	Member

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1 ---Upon commencing at 10:03 a.m.

2 THE REGISTRAR: This hearing is now in
3 session. Please be seated.

4 THE CHAIRMAN: Mr. Thompson?

5 MR. THOMPSON: Good morning, Mr.
6 Chairman.

7 THE REGISTRAR: Excuse me, Mr. Chairman.
8 Dr. Effer wanted to do a correction.

9 THE CHAIRMAN: I am sorry.

10 DR. EFFER: In the cross-examination
11 yesterday, Mr. Chairman, there was a question asked by
12 Mr. Campbell of me which requires another answer.

13 THE CHAIRMAN: All right.

14 ARTHUR RAYMOND EFFER,
15 CHARLES WILLIAM DAWSON,
16 JAMES RICHARD BURPEE,
17 GARY NEIL MEEHAN,
JOHN DOUGLAS SMITH,
AMIR SHALABY; Resumed.

18 DR. EFFER: On page 19696, line 2, Mr.
19 Mr. Campbell's question is --

20 THE CHAIRMAN: Just hold it, please.

21 DR. EFFER: It is yesterday's. It is the
22 carry on of his cross-examination yesterday morning.

23 THE CHAIRMAN: All right.

24 DR. EFFER: On line 2, Mr. Campbell's
25 question starts:

1 "Is that for every year or for every
2 19 years?

3 And my answer on line 4 should have been,
4 "for every 19 years".

5 Then the following question and answer on
6 lines 5 and 6 are not applicable; don't follow on from
7 that.

8 THE CHAIRMAN: Perhaps, Mr. Howard, you
9 might advise Mr. Campbell. I don't know whether he
10 follows the transcript that closely, just to --

11 MR. HOWARD: Thank you, Mr. Chairman. I
12 will do that.

13 THE CHAIRMAN: All right.

14 Now, Mr. Thompson.

15 Is that completed, Doctor?

16 DR. EFFER: Yes. Thank you, Mr.
17 Chairman.

18 MR. THOMPSON: Thank you, Mr. Chairman.

19 CROSS-EXAMINATION BY MR. THOMPSON:

20 Q. Good morning, Panel. Firstly, I
21 should, for those of you who don't know me, my name is
22 Stephen Thompson. I represent the Ontario Federation
23 of Agriculture. This morning I will be referring
24 briefly to Exhibits 452, 468, 344, and transcript
25 Volumes 109 and 111.

1 . Firstly, with reference to transcript
2 Volume 109, page 19074, on line 20, there is a
3 statement something to the effect that wet scrubbers
4 will produce blowdown high dissolved salts and that
5 matter has been quite an issue with us on the Lambton
6 site.

7 Now, maybe I misunderstood something in
8 the evidence in chief, but what does this mean? Is it
9 an issue that we should be concerned about or just what
10 did this statement mean and why has the matter been an
11 issue?

12 MR. DAWSON: A. Maybe I can speak to
13 that. As you maybe already know, a scrubber uses a
14 slurry of limestone to remove the SO(2) and that is
15 sprayed down through the hot gas and as a result of
16 that, there is a lot of evaporation of water into the
17 flue gas. So a lot of water vapour that leaves with
18 the flue gas.

19 So, what is really happening with the
20 scrubber is that you are concentrating the dissolved
21 solids that are in that water within the scrubber, so
22 that you get a concentration of salts that are
23 dissolved in the water that don't evaporate with the
24 water into the flue gas remaining in the scrubber, and
25 that concentration will build up to -- well, it will go

1 on forever unless you do something about it and you
2 wind up with a very corrosive situation. So
3 ultimately, you have to blow down. You have to take
4 out a stream of liquid waste.

5 Q. Is that then a safety issue or a --

6 A. No, it is not a safety issue. It is
7 simply a chemical issue. It is part of the chemical
8 process needed take out a blowdown stream to control
9 the concentration of dissolved solids within the
10 scrubber.

11 Q. Does that increase then the amount of
12 waste that you would take out of this process?

13 A. This is a liquid waste that you have
14 that you have to deal with.

15 Q. Presumably, again, on site?

16 A. That's right, yes, and that waste
17 will then be treated to precipitate heavy metals. The
18 problem is though that it leaves you with a waste
19 stream that is high in chlorides which are extremely
20 soluble and virtually impossible to precipitate.

21 Q. Is there something that can be done
22 to correct this or are you proposing to do it, and if
23 so, what?

24 A. Well, if you dispose of the waste, it
25 is not a problem because that blowdown, in fact, comes

1 out with the waste and is disposed of in the pile.
2 When you dewater that, the gypsum, if it is going to be
3 used for waste, there is some moisture content
4 remaining in the gypsum which goes on the pile and that
5 provides the blowdown that you need out of the
6 scrubbers. So you have some chlorides in that waste
7 and it is landfilled along with the waste and that has
8 been common practice throughout North America.

9 If you produce a commercial gypsum, then
10 you wash all those dissolved solids out of the gypsum
11 and that leaves you with a stream of what is relatively
12 concentrated chloride that has to be disposed of. You
13 have got two options: You either put it back into the
14 river or you have got to do something with it and that
15 is what we are talking to the Ministry about now.

16 One of the options is that you go through
17 what is a relatively expensive process that ultimately
18 leads to evaporation of the blowdown and leaves with
19 you a solid chloride waste, but that is a relatively
20 expensive approach to dealing with the waste. So, it
21 is an issue of, are the chlorides harmful to the
22 environment or are they not really significant; and if
23 they are harmful, then ultimately we will have to deal
24 with them. And this is something that we are dealing
25 with through this MISA, Municipal Industrial Strategy

1 for Abatement program.

2 Q. I think the answer to my next
3 question might already be included in an outstanding
4 undertaking, but would it be possible that restarting
5 Keith, Lennox and Hearn might cause a need for new
6 inter-area transmission; and before you answer, would
7 this or could this already be included in the answer to
8 AMPCO's request No. 478.11 in Volume 111, page 19400
9 about consultant studies on potential conversion of
10 these stations?

11 MR. MEEHAN: A. Could you repeat the
12 question for me, please?

13 Q. Could it be possible that restarting
14 Keith, Lennox and Hearn might cause a need for new
15 inter-area transmission?

16 A. I don't think there is a transmission
17 expert on the panel, so I hesitate to answer the
18 question.

19 Lennox is operating now and can operate
20 quite freely and to my knowledge would not encounter
21 transmission problems by its operation. In fact, when
22 we demothballed it, it was used, in fact, to solve
23 transmission problems; in other words, by running it in
24 that part of the province, it helped because
25 transmission linkage was weak, inter-area transmission.

1 Hearn. I would guess again that there
2 would be no problem with Hearn because that
3 transmission is still in-service and, in fact, running
4 Hearn might alleviate heavy transmission down into
5 downtown Toronto.

6 In the vicinity of Keith, I would
7 estimate that there could be transmission
8 considerations with respect to starting up generation
9 at Keith.

10 But I think the rest of your question
11 was, would that be dealt with in the undertaking and
12 the answer to that is no. I think you are asking a
13 system planning type of question, a transmission system
14 planning type of question, and the undertaking there, I
15 think, will be dealing with just the technical station
16 designs for those stations, not the system
17 implications.

18 [10:15 a.m.]

19 Q. Would it be tremendously difficult to
20 enhance that undertaking to include briefly just this?
21 If it would be extremely difficult, it's not important.
22 But I thought from the way this undertaking was worded
23 that it might already have been included, and if it
24 wasn't it would appear that it should be included as
25 part of the consultant studies on the conversion

1 because it would appear to me that there is very little
2 sense in converting something if you can't get it on
3 the system.

4 A. I think that we should be able to add
5 something to that interrogatory.

6 Q. That would be fine.

7 THE CHAIRMAN: It might be
8 administratively easier to make it a separate
9 interrogatory.

10 MR. HOWARD: Then it won't get lost.

11 THE CHAIRMAN: I can't remember whether
12 this came up in the previous Panel 7, but it seems to
13 me that it is a question that can be readily answered
14 by someone from that panel.

15 MR. MEEHAN: That's where I would go to
16 get the answer, Mr. Chairman.

17 MR. THOMPSON: Then a separate
18 undertaking would be fine.

19 THE CHAIRMAN: 478 number?

20 THE REGISTRAR: 478.18.

21 THE CHAIRMAN: Thank you.

22 MR. THOMPSON: Thank you.

23 ---UNDERTAKING NO. 478.18: Ontario Hydro undertakes to
24 provide whether restarting Keith, Lennox
and Hearn might cause a need for new
inter-area transmission.
25

1 MR. THOMPSON: Q. On the same topic, are
2 the life extensions to Lambton or Nanticoke likely to
3 require additions is to or expansions of inter-area
4 transmission, or is the system adequate to include the
5 life extensions?

6 MR. MEEHAN: A. I think this is so far
7 into the future that it might be difficult to answer
8 that question. But my estimate would be that it would
9 have a very small impact because the transmission is in
10 place to support those stations now, we are only making
11 them stay longer.

12 Q. That is fine.

13 How much if any of the decision to extend
14 Lambton would or could be influenced by its location at
15 an exchange with another utility? Is there any
16 consideration or credit given for that?

17 Lambton is effectively sitting on an
18 exchange point with the U.S. utilities. Does that have
19 any influence, if so why or why not?

20 A. As near as I know the concept of
21 importing limitations as a result of having Lambton
22 operating longer, or the potential improved ability to
23 export were not considered in the decision at all to
24 extend the life of the plant.

25 Q. So neither would any considerations

1 for system stability be?

2 A. No. Details like that were not
3 considered.

4 Q. Which leads me to the question, why
5 not? Were they not important?

6 A. I don't believe they are important or
7 that they would be significant at this time looking so
8 far ahead.

9 Q. To change topics a little bit. On
10 page 68 of Exhibit 468, which is the Environmental and
11 Health Effects exhibit, on heading 5.43 where it makes
12 some commentary about ozone sensitive plants -- has
13 everybody got that? It mentions that white beans as
14 well as tobacco are sensitive crops.

15 Now, not to diminish the importance of
16 the tobacco crop, it's my personal views and no one
17 else's that the tobacco industry has got so many other
18 problems other than ozone that I will concentrate my
19 questions to the white bean sector.

20 The white bean producers are members of
21 the Federation of Agriculture, and I myself grow white
22 beans on my own farm, so I have particular interest in
23 the ground level ozone. I am just not sure from the
24 evidence just what to conclude about what Hydro is
25 doing to reduce ozone damage to white beans on my and

1 my neighbour's farms. I appreciate that it's Ontario
2 Hydro's evidence that it generates or produces very
3 little ground level ozone, but because of the serious
4 problems of ozone that we experienced even a little at
5 or near the threshold levels is a problem.

6 I have got a lot of statistics and data
7 given, but do you have of any rule of thumb, for
8 example, all things being equal, what Ontario Hydro is
9 proposing to do in this planning exercise? Do you have
10 any idea as to how much the ground level ozone might be
11 reduced by a percentage on any given farm? Just show
12 that I can for my own planning purposes on my own farm
13 I can go home and say, well, Ontario Hydro has
14 reassured me that it is doing the proper thing, and
15 that the ozone coming from Ontario Hydro's sources
16 should go down by 1 per cent, 2 per cent, 5 per cent,
17 and that it helps me in my planning decision as to
18 whether I should grow white beans or not. Do you have
19 any guidelines for me on that?

20 DR. EFFER: A. Mr. Thompson, in my
21 direct evidence I did calculate or come up with a
22 guess, I guess, of how much our nitrogen oxide
23 emissions would be contributing to ozone in southern
24 Ontario, and it's a difficult exercise to do, but we
25 guessed around -- I think it's a 10 per cent

1 contribution to ozone levels.

2 Q. Yes, I recall that from the evidence.

3 A. So I think additional information
4 suggests that if one looks at ozone concentrations
5 coming from across the border and moving in an easterly
6 direction from Detroit/Windsor area to Toronto, there
7 is a fairly progressive reduction of ozone levels until
8 it hits the urbanized areas.

9 But if you could turn to the following
10 page of the question, on 468, you will see a graph
11 there, figure 5.13, which shows that the highest ozone
12 level is experienced at Long Point. In other words,
13 the most southerly point is experiencing the drift of
14 ozone from the southern parts from the United States.
15 Then further downwind you find that Sarnia is at a
16 lower level in spite of the local pollution, and then
17 Toronto is even further away and experiences lower
18 pollution. However, when we get beyond downwind of
19 Toronto we can see there that the emissions from the
20 urbanized areas do contribute to a higher level at a
21 monitoring station at Stouffville.

22 So to interpret this figure in a general
23 sense is that a great majority of the ozone production
24 is coming from United States into Southern Ontario. It
25 goes down as it moves into Ontario and then gets

1 increased again but not as high as the inflowing ozone
2 levels as it passes over urbanized areas.

3 I guess in a broad sense, to answer your
4 question, I think that Ontario Hydro's contribution
5 initially being very small, now plans to reduce
6 nitrogen oxide emissions, it will be a small reduction
7 to a small contribution to your ozone burden.

8 Q. I appreciate that. Just dealing with
9 the 10 per cent figure again, is it your opinion that
10 Ontario Hydro's contribution would stay at or near or
11 maybe slightly below the 10 per cent that you indicated
12 earlier?

13 A. That is our current calculation. If
14 you look at the demand/supply update, we have there
15 some figures which show the decline of nitrogen oxide
16 emissions with time.

17 Q. I think that answer is satisfactory.

18 A. So, in other words, in years to come
19 our contribution is declining nitrogen oxides which
20 will in turn reduce our contribution to ozone.

21 Q. Okay, thank you very much, Doctor.

22 Would I be correct in understanding in a
23 in addition to the biomass options mentioned in Exhibit
24 344, there have been several agricultural animal waste
25 methane gas generators constructed in Ontario.

1 Does anybody have any knowledge of that?

2 [10:25 a.m.]

3 MR. SHALABY: A. Facilities constructed
4 for?

5 Q. Burning methane gas to generate
6 electricity.

7 MR. DAWSON: A. Not that I am aware of.
8 I haven't heard of any, but that doesn't mean it hasn't
9 happened.

10 Q. So, again, I seem to recall in the
11 evidence somewhere that it was Hydro's evidence that
12 the methane gas has a substantial damaging effect on
13 the atmospheric gases.

14 Should this type of potential have been
15 given more weight by Hydro in evaluating the cost
16 benefit analysis; that is -- I should back up.

17 Was this source of electricity evaluated
18 at all by Hydro or is it considered to be of such a
19 small commercial potential that it isn't part of the
20 analysis?

21 MR. SHALABY: A. I think the answer is
22 that we did not consider the potential explicitly. Now
23 we are aware that in different parts of the world,
24 people would generate electricity from farm residues
25 and animal waste and so on. They are typically small

1 installations that are in the kilowatt range rather
2 than a utility size facility, but we haven't given them
3 explicit consideration.

4 Q. Okay. I am having a little
5 difficulty in tabulating just what is to be done and
6 when on various fossil stations. It would be very
7 helpful to me and I guess rather than giving a series
8 of questions, I think it can be possibly done far
9 quicker with an undertaking to have a simple chart
10 showing a summary of just what is to be done, where,
11 and when.

12 For example, the first column would be
13 the station - Lambton, for example, the action taken;
14 the second column would be scrubbers; the third column
15 titled, What For and in this case, the action taken
16 would be to lower SO(2) by -- fill in the percentage.

17 The fourth column could be year in
18 service, which in this case, the first two scrubbers at
19 Lambton in 1994; and the fifth column would be the
20 resulting level of service that that generating
21 facility would be used. And if my understanding is
22 correct, that would be base to intermediate.

23 This could sort of be an update of a
24 modification of figure C1 on Exhibit 452 where you put
25 in the dollar amounts that each of these various things

1 that you plan to do are going to cost. But what I am
2 looking for is more of an executive summary without the
3 dollars just so that I can say, for example, that you
4 may plan to put on low NOx burners, if you could
5 indicate that on site 'X', you plan to put on low NOx
6 burners in the year something or other to lower NOx by
7 whatever per cent you are going to lower them by and
8 that as a result of that, this plant will now be used
9 for peaking or base or intermediate or something.

10 When I was looking at my questions, I
11 realized I had a whole lot of questions, but I think
12 that if that sort of thing could be done for the fossil
13 stations that you have and plan to use in this update,
14 that will be very helpful.

15 Could that be provided?

16 MR. MEEHAN: A. I think what you are
17 asking for could be described as more details on the
18 assumptions regarding the environmental equipment that
19 is--

20 Q. Yes.

21 A. --assumed to be added in the updated
22 plan.

23 Q. It is just that I seem to recall that
24 you plan to put on certain equipment at Nanticoke by
25 the year 2014.

1 What I am looking for is, in 1992, when
2 do you plan to have it in-service, what is it going to
3 do when it is put in-service and what is it going to
4 mean then for the use of that plant?

5 A. Yes, I understand your question and
6 all that information is available so that we can put it
7 in a form that would -- and I think that is probably
8 the best way to --

9 Q. That would be very helpful. It would
10 save me a lot of difficulty in trying to gather all the
11 information and then possibly making an error when I
12 summarized it.

13 THE CHAIRMAN: You are talking about FTD,
14 SCR and ESPs; is that right?

15 MR. THOMPSON: All those wonderful --

16 THE CHAIRMAN: You are talking about
17 environmental controls.

18 MR. THOMPSON: Yes, all those wonderful
19 environmental controls, yes.

20 THE CHAIRMAN: Technological and
21 environmental controls.

22 MR. THOMPSON: Yes, because when I am
23 trying when I am trying to explain it to people, it is
24 difficulty to understand that there is a difference
25 between scrubbers and SCRs. And you know, if we could

1 sort of have it on the chart to say that SCRs do this,
2 scrubbers do that and so on, it would be very helpful.

3 So, could that --

4 MR. SHALABY: Before we leave that topic,
5 I think you are asking for when would Hydro do things
6 and I think Mr. Meehan is saying he would provide the
7 assumptions we base Exhibit 452 on.

8 MR. THOMPSON: Q. Oh, certainly, and
9 with whatever assumptions you feel appropriate --

10 MR. SHALABY: A. I just want to draw to
11 your attention that the assumptions are just
12 assumptions at this time that are going to get further
13 examined. There are no commitments at this time. I
14 just want to make the distinction between assumptions
15 and commitments.

16 Q. Yes, absolutely. It is just that at
17 the present time there are a lot of possibilities.
18 There are certain things that you are planning to do.
19 There are other things that, as I understand it, you
20 are thinking about doing and may not do.

21 It is difficult for me to pick out the
22 things that you are going to do and decide when you are
23 going to do them and what the results are going to be.
24 And certainly use whatever assumptions you feel
25 appropriate. And you could put in that at the present

1 time, there is nothing planned for this station, but --

2 THE CHAIRMAN: And you want it station by
3 station; is that correct?

4 MR. THOMPSON: Yes, that would be
5 helpful. On some stations where you don't plan to do
6 anything, you can just simply state we are not planning
7 to do anything at this station and it is going to stay
8 at whatever load it has now.

9 It could be possible that at one of the
10 stations that you are not planning to do anything with,
11 there may already be installed certain equipment which
12 would make it somewhat improved from sort of a base
13 level plant with nothing on it.

14 THE CHAIRMAN: You better have a number
15 for that, I guess.

16 THE REGISTRAR: 478.19.

17 THE CHAIRMAN: Thank you.

18 ---UNDERTAKING NO. 478.19: Ontario Hydro undertakes
19 to provide the assumptions that Exhibit
20 452 is based on, a summary and
consolidation.

21 MR. THOMPSON: Q. Would I be correct,
22 and I am not sure about what Mr. Klippenstein --

23 THE CHAIRMAN: Just hold it a minute. It
24 might be a good idea when you get the scheme of the
25 table - I would get the impression that all this has

1 already been given in evidence but this is a
2 consolidation exercise - you might check it out with
3 Mr. Thompson and make sure that that is the sort of
4 thing that he is looking for and if there is any
5 difficulty about it, then we may have to revisit the
6 thing.

7 MR. THOMPSON: Yes. I suspect, I hope
8 that everything has already been given in evidence. It
9 is just a summary and consolidation of what has already
10 been on the record so far.

11 Q. Would I be correct, and I am not just
12 too sure what Mr. Klippenstein alluded to yesterday,
13 that the London Victoria Hospital MSW facility was or
14 is technically sound but had problems because of the
15 low tipping fees at the local municipal landfill?

16 Based on some of the answers given to Mr.
17 Klippenstein yesterday, I am not too sure whether
18 anyone on the panel can answer that, but if anybody
19 could, I would appreciate knowing.

20 MR. DAWSON: A. Yes, it is my
21 understanding at least that the problems are associated
22 with supply of garbage, disposal of ash and the costs
23 associated with that rather than the technical
24 feasibility of the incineration heat recovery
25 technology that is there, yes.

1 Q. Okay. Now, I understand from Exhibit
2 344 that there currently is a 3,000 metric tonne per
3 day MSW facility in Detroit producing 65 megawatts of
4 power. I am just not too sure. I was to be provided
5 an Exhibit 344 this morning but apparently it is locked
6 in someone's car. If you would accept subject to check
7 that I read this in Exhibit 344 and --

8 A. I think it was one of the examples
9 that was brought up yesterday, too.

10 Q. Yes.

11 A. In the performance table.

12 Q. And would I be correct in
13 understanding that if this facility were in the Metro
14 area, that given its volumes, that it could possibly
15 account for up to half of the MSW in the Toronto area?

16 What I am trying to get at is, this
17 facility in Detroit would be a fairly large and
18 significant facility; is that correct?

19 A. That is correct, yes.

20 Q. Okay. Therefore, as I understand it,
21 this is an active facility, half a day's drive
22 depending on how fast you drive from here, apparently
23 passed all the environmental requirements of the State
24 of Michigan, would appear to be working at fairly high
25 capacity; is that your understanding? That is what I

1 gathered from your evidence.

2 A. I think that is correct. At the time
3 that that plant was brought in-service, there was a
4 good deal of controversy over it because of the limited
5 environmental control equipment that is on it and there
6 was a good deal of concern, I think, from people in
7 Windsor about its operation and there was a lot of
8 lobbying to have it shut down which ultimately was
9 unsuccessful.

10 So, I don't think it has any spray dry
11 equipment on the back end to remove HCl and SO(2). I
12 am sure it has ash removal equipment. It will have a
13 precipitator but I don't think it has a scrubber on the
14 back end.

15 Q. So this facility then would be a
16 reasonably good example of how technical potential and
17 environmental and political things all get mixed in
18 together; is that a fair statement, that something that
19 is technically capable may still have considerable
20 opposition?

21 A. I think that is true, yes.

22 Q. Okay.

23 A. Certainly with refuse consideration
24 that is very true. It always has been.

25 Q. It is my understanding that the

1 Government of Ontario has some considerable concerns
2 about that facility; is that your understanding as
3 well?

4 A. I don't know about the Government of
5 Ontario having concerns about it, but certainly at the
6 time it was brought into service, I think down in the
7 Windsor area there was considerable concern and I don't
8 know whether that is carried over and the government
9 still has a concern about it or not. I don't know.

10 Q. All right. I bring that up because
11 it is a basis for my next question. From talking with
12 Ms. MacDonald, I understand that the Government of
13 Ontario is an intervenor opposing in some way this
14 facility.

15 Now, given that what I have said, or
16 assume for a moment that is correct based on the
17 information I received this morning, is it a
18 possibility that the State of Michigan in turn might
19 object to because of the closeness of the Lambton site
20 to the State of Michigan and given the dispersion
21 facilities there, the dispersion chart that we got the
22 other day -- and this may be a legal question. I am
23 trying to pose it in a way that can be answered by
24 planners.

25 Given the environmental considerations

1 only on dispersion and so on, should the State of
2 Michigan be included in this planning process or
3 just -- as planners now, is the State of Michigan
4 considered to be in the planning process a participant
5 or a party or - I don't want to use the word - victim
6 of this planning process? Is this part of the process
7 or --

8 MR. MEEHAN: A. The planning of
9 facilities in both jurisdictions is done pretty well
10 separately. The only exception that I can think of in
11 the planning area would be the potential for one
12 jurisdiction purchasing electricity from another. I
13 don't know of any planning other than that.

14 [10:40 a.m.]

15 We have discussed with the people in
16 Michigan from time to time whether we could coordinate
17 our plans better than we are, but to my knowledge that
18 has never gone anywhere.

19 Q. Okay. I just envisaged the
20 possibility that somehow six months from now the State
21 of Michigan showing up here at this hearing and saying,
22 just wait a minute, we weren't given notice that you
23 were going to do this.

24 Now again, I am treading into legal
25 ground, but as planners is this the sort of thing that

1 you would include in your planning process?

2 MR. SHALABY: A. I don't know about them
3 coming here.

4 Q. Again, I am going back to --

5 A. They are informed. In our
6 communication with colleagues in other utilities and
7 regulators of other jurisdictions, we have sent to them
8 the documents that we submitted to this hearing, not
9 all of them but the basic ones. There are ongoing
10 operating and planning committees that both Ontario
11 Hydro and the utilities in Michigan would sit on.
12 There are reliability councils and operating committees
13 and all kinds of utility forums where the utilities
14 would exchange information.

15 Yesterday there was mention of the
16 International Joint Commission, they talk about
17 watersheds and air sheds that are common to the Great
18 Lakes.

19 So, there are various places where the
20 State of Michigan and Ontario would share information,
21 but I decline to comment on whether they have any plans
22 to come and object.

23 Q. Given that, it is not likely that the
24 State of Michigan could plead that they were ambushed
25 by --

1 MR. HOWARD: I might answer that. If
2 they turned up claiming to be ambushed, we would claim
3 they had specific notice and they are a year and a half
4 late.

5 MR. THOMPSON: Thank you, Mr. Howard.

6 Q. Finally, let's turn to the somewhat
7 fanciful in that as a planning hearing that sometimes
8 plans may not be the traditional ones. Suppose for an
9 instant that I were the Minister of Agriculture and
10 that I was tired of having angry farmers come to
11 Parliament Hill, and I wasn't particularly overjoyed at
12 paying people like myself money subsidies to grow crops
13 that we couldn't sell, and someone from an
14 environmental group came to me and said, "Why don't we
15 give these subsidies instead to wind farms to produce
16 something we know we can sell."

17 So, I thought, well, it sounds like a
18 reasonable idea because we should do something. And
19 they also said, "Let's apply it to a soil conservation
20 program to try to take marginal land out of
21 production." And I think to myself, well, as Minister
22 that's two good things. We are making real progress
23 here. Now all I have to do is go to the brilliant
24 engineers and planners at Ontario Hydro, and I also
25 believe or somebody has told me that there are a lot of

1 people like my friend Mr. Greenspoon who likes the
2 looks and possibility of the cash flow of wind
3 generation. I am the Minister, I come to you and say,
4 "All right, well, I have heard a lot about alternative
5 sources, it would appear that wind generation has the
6 most potential," given the current economics, if my
7 memory is correct, it's about 10 cents per
8 kilowatthour.

9 What would you as Hydro planners say to
10 me as Minister? What should we look at? Is there
11 something we can do? Is there a potential? Is it a
12 pipe dream of a foolish Minister of Agriculture that
13 thinks he can do something? Or just put on your
14 planning hats and look at it from a non-traditional
15 planning point of view. Is there something there that
16 we in the agricultural community should be looking at
17 with Ontario Hydro, or is the whole thing preposterous?

18 MR. SHALABY: A. I guess what we would
19 say is, The Honourable Mr. Thompson, we would say
20 that --

21 Q. That's the first time I have ever
22 been called that. Thank you. I will make sure it's on
23 the record.

24 MR. HOWARD: It's hypothetical.

25 MR. THOMPSON: It's illustrative, too, I

1 would suppose.

2 MR. SHALABY: It's not too hypothetical.

3 I understand some of the policy advisers in the
4 Ministry of Agriculture have had wind turbines on their
5 own farms.

6 MR. THOMPSON: Q. Non-functioning ones,
7 I might add.

8 MR. SHALABY: A. I didn't say.

9 There are in fact proposals from large
10 landowners, and I don't know whether you call those
11 farmers in your community or not, people who have large
12 holdings in the Bruce Peninsula, to generate additional
13 cash flow from wind farming on their land, preserving
14 the traditional uses or the agricultural uses, as well
15 as having some wind turbines on the periphery or
16 somewhere where it doesn't obstruct the operation of
17 the farm. To my knowledge Ontario Hydro is
18 contributing to a study, a resource assessment on those
19 lands. So it is into the totally fictitious proposal.
20 There are farmers who own land who are wanting to
21 increase their cash flow by having wind farms on their
22 properties.

23 In the California areas that has also
24 been a factor in the development of wind farms.
25 Marginal land and that increases the value of the land

1 and increases the yield from the land. .

2 Q. I seem to recall a bit of evidence as
3 to what the potential for that was in terms of acreage
4 and so on.

5 Again, this may be a poor question, but
6 how many megawatts per acre - and I realize I am easily
7 comparing apples to oranges - might one expect to
8 generate per acre on a wind farm?

9 Again, it would depend on what size of
10 wind generator you have got, but is there any rule of
11 thumb on that?

12 I am asking the question as a farmer
13 because that's how we compare things, as megawatts per
14 acre, bushels per acre.

15 A. As a very rough guess, I guess you
16 could put somewhere between ten, give or take five,
17 wind machines. Well, it depends on wind speeds, on
18 spacing between the wind machines.

19 Typically people would space the machines
20 eight diameters apart from each other, so the eddy
21 currents and the wake of the wind from one turbine
22 doesn't overshadow on the other one.

23 It's a fairly sophisticated business, the
24 placement of wind turbines on a landscape, but it
25 depends whether it's hilly or it's flat, and so on.

1 And if each machine is somewhere in the 200 to 300
2 kilowatts, you would probably have maybe up to 2 to 5
3 megawatts per acre. That maybe generous. It could be
4 smaller and that.

5 Q. One of the joys of being in my
6 position is I could have my sponsoring organization
7 completely overrule any thought of this sort of thing,
8 so it could be very fanciful.

9 Thank you very much, panel.

10 Mr. Chairman, those are my questions.

11 THE CHAIRMAN: Thank you, Mr. Thompson.

12 Ms. Marlatt, I gather you have
13 accommodated AECL by going ahead; is that right?

14 MS. MARLATT: Yes, that is correct.

15 THE CHAIRMAN: So they owe you one, I
16 take it.

17 MS. MARLATT: You could phrase it that
18 way.

19 I would like to begin by introducing
20 myself to the panel, those of you who I haven't met
21 before. My name is Constance Marlatt and I am here
22 today representing the North Shore Tribal Council, the
23 United Chiefs and Councils of Manitoulin and the Union
24 of Ontario Indians.

25 I have passed out to your counsel and to

1 the Clerk, Materials for Cross-Examination of Panel 8.
2 I would just like to check to see if everyone has that
3 document and ask if it could be entered as an exhibit.

4 THE REGISTRAR: That will is 491, Mr.
5 Chairman.

6 ---EXHIBIT NO. 491: Materials for cross-Examination of
7 Panel 8 by NSTC/UCCM/VOI.

8 CROSS-EXAMINATION BY MS. MARLATT:

9 Q. I have divided my cross-examination
10 into several difference areas and I will just let you
11 know what the areas are: the natural environment, the
12 social environment, economics, planning process, issues
13 specific to Aboriginal communities, and some general
14 questions.

15 The first series of questions will be
16 directed at you, Dr. Effer. I would like to ask you to
17 look at page 1 of the exhibit we have just marked as
18 491, and that is a transcript reference to Volume 108
19 page 18864, lines 3 to 7 and 13 to 15. You state that:

20 "I am going to describe six of the
21 main environmental issues which we
22 believe Ontario Hydro should be
23 addressing, and these are acid rain, the
24 greenhouse effect, ozone, air toxics,
25 discharge to water, and solid waste

1 management."

2 At line 13 you then state that you will:

3 "...emphasizing in my presentation the production, the
4 generating part of the environmental effects."

5 Dr. Effer, would it be correct to state
6 then in your examination in chief your testimony was
7 with reference to the environmental impacts of existing
8 fossil stations; would that be correct?

9 DR. EFFER: A. Yes.

10 Q. Thank you. In fact, in your
11 testimony you did not give any testimony on the
12 environmental impacts of constructing a fossil fuel
13 facility; would that be correct?

14 A. No, I did not. Not in a specific
15 sense. I did it in a very general sense.

16 Q. Did you specifically give any
17 evidence on the environmental impacts of constructing a
18 new site?

19 A. I did mention in my alternative
20 energy, some of the options where construction matters
21 did have a significant environmental effect.

22 Q. Thank you, Dr. Effer, we will get to
23 that in a minute, the alternative technologies.

24 What I am referring to now is just with
25 reference to the fossil fuel technologies.

1 A. No, I did not go into detail on the
2 construction effects.

3 Q. And by stating that you did not go
4 into detail, you didn't refer at all in your testimony
5 to the impacts of the construction of a new fossil fuel
6 facility; correct?

7 A. Correct.

8 MR. SHALABY: A. You may recall in
9 giving the scope of testimony for this panel I
10 indicated that Exhibit 452 had an impact of us
11 emphasizing the existing system and the plans for the
12 existing system.

13 Q. Certainly, Mr. Shalaby.

14 A. And de-emphasizing to the point of
15 omission any mention of site-specific activities.

16 Q. Yes, and that should make my
17 questions quite easy to answer in the next hour.

18 Dr. Effer, in your testimony on
19 alternative technologies, and I believe you just
20 pointed this out, you did in fact review some potential
21 environmental impacts not related to just the
22 generation.

23 DR. EFFER: A. That's correct.

24 Q. And you referred to, and we see it on
25 pages 2, 3 and 4 of Exhibit 491, and those are pages

1 19169 to.71, Volume 109. Just to give an overview of
2 these pages, you refer to impacts such as noise, visual
3 impacts and water consumption; is that correct, Dr.
4 Effer?

5 A. That's correct.

6 Q. This is was not an exhaustive list
7 that you gave here. This was just an overview; is that
8 correct?

9 A. These are the main impact, yes, what
10 I consider to be.

11 Q. Dr. Effer, in your testimony then you
12 did not ever compare these types of impacts from all
13 alternative technologies to similar impacts from a new
14 fossil station; correct?

15 We can take an example, for example, with
16 the issue of noise, you did not compare the noise
17 impacts from certain alternative technologies to fossil
18 fuel facilities?

19 A. That's correct, yes.

20 Q. Dr. Effer, in your testimony
21 concerning both the alternative technologies and the
22 fossil fuel technologies, you did not testify on the
23 existing environment in Ontario; correct, a description
24 of the natural environment as it is right now in
25 Ontario?

1 A. Not in detail, no.

2 [10:59 a.m.]

3 Q. Thank you. I would like to move on
4 some questions in the area of social environment.

5 And Dr. Effer, looking at page 5, which
6 is your resume that was filed as part of the Panel 8
7 materials from Ontario Hydro, would it be correct for
8 me to state that you are not an expert on social
9 impacts?

10 A. That is correct.

11 Q. Thank you. And there is no one else
12 on the panel who would be an expert on social impacts;
13 is that correct?

14 MR. SHALABY: A. That is correct.

15 Q. Thank you. And referring to Exhibit
16 468 which is the materials relating to the
17 environmental and health impacts, I just have a general
18 question, Dr. Effer: Can you confirm for me that this
19 document does not consider social impacts with the
20 exception of the area of health?

21 DR. EFFER: A. It does not connect
22 directly with social impacts except in an indirect way
23 in that the medical impacts of the emissions that we
24 have recorded here obviously will have some social
25 impacts.

1 Q. Thank you.

2 A. But those were not recorded.

3 Q. All right. Looking at pages 6 and 7
4 which come from Volume 112, page 19649 and 19650, at
5 line 19, Mr. Martin Campbell asked you:

6 "I wonder what weight should be given
7 to health effects and planning? Where
8 should it rank in terms of your
9 priorities in your view?"

10 And you answered at line 22:

11 "I think it is one of several factors
12 which are brought along in parallel. And
13 when decisions are made, the health
14 effects of a facility is one of many
15 items which will be brought to bear on
16 the final decision. I can't say anything
17 about the priority of it relative to
18 other factors that are needed to make the
19 final decisions."

20 Dr. Effer, as an outsider looking in, how
21 can we replicate the importance of the health factor in
22 your planning methodology? And Mr. Shalaby, you are
23 welcome to answer that.

24 MR. SHALABY: A. I am trying to refer to
25 Exhibit 74, which is the demand/supply planning

1 strategy, and it has in it a discussion that is quite
2 relevant and is very similar to that discussion here on
3 the significance of health and safety and where it
4 ranks with other planning criteria.

5 We can go through it page by page, but it
6 is essentially saying that the demand/supply planning
7 strategy aims primarily at customer satisfaction and
8 customer satisfaction is a function of good performance
9 in the environmental area, low costs and high
10 reliability.

11 And it goes into detail and says that the
12 environmental performance is a very important part of
13 protecting the environment. It is keeping the public
14 and the employees safe. I am quoting from Exhibit 74.

15 So, right up there, No. 1 in the planning
16 strategy is customer satisfaction and safety
17 contributes to customer satisfaction in a big way.

18 Q. All right. Dr. Effer, does this
19 explain your answer that, "I can't say anything about
20 the priority of it relevant to other factors that are
21 needed to make the final decisions"? Perhaps you can
22 explain to me what you meant by that then.

23 DR. EFFER: A. I think I have been given
24 this excerpt from the previous referencing in which I
25 think is pertinent.

1 It says on page 29 of that exhibit that
2 some of the factors have a higher weighting than others
3 and these weightings will change with time depending on
4 customer priorities and values and other circumstances.
5 Thus, it is not practical to establish a definitive
6 ranking for the various criteria; however, it is
7 reasonable to classify the factors as primary criteria
8 which must be met and secondary criteria which may
9 influence the recommendations.

10 THE CHAIRMAN: I am sorry, Dr. Effer,
11 where are you reading from?

12 DR. EFFER: I am reading from page 29 of
13 the Exhibit 74, Demand/Supply Planning Strategy, Mr.
14 Chairman.

15 THE CHAIRMAN: Thank you.

16 MS. MARLATT: Q. All right. Dr. Effer
17 then, does that testimony in your mind explain what you
18 meant when you said you couldn't say anything about the
19 priority of it relative to other factors?

20 DR. EFFER: A. In this excerpt, there
21 were primary and secondary factors. I think health and
22 safety matters would be considered one of the primary
23 matters.

24 Q. All right. Thank you. Dr. Effer, in
25 your testimony, you did not provide any information on

1 the social impacts of a fossil fuel facility; is that
2 correct?

3 A. That is correct.

4 Q. And you did not compare the impacts
5 impact of a fossil fuel facility that be would be cited
6 in an urban versus a rural environment, correct?

7 A. Correct.

8 Q. Thank you. And more specifically
9 then, there is no information provided by this panel on
10 the social impacts of a fossil fuel facility on
11 Aboriginal communities, correct?

12 A. Correct.

13 Q. Looking at page 8 of Exhibit 491 --

14 MR. SHALABY: A. Just to leave the
15 record complete in our view and it is obvious, the
16 reason we didn't speak about social impacts is that it
17 is strongly site specific. The social impact of a
18 facility is very strongly related to where it is
19 located, how big it is, when is it built and all of
20 that.

21 So, the reason we didn't address that is
22 that it is specifically a site-related issue rather
23 than a generic issue.

24 Q. Mr. Shalaby, are you testifying as an
25 expert on social impacts?

1 A. Not as an expert on social impacts,
2 but --

3 Q. Okay. All right. Dr. Effer, can you
4 testify as an expert on social impacts on that issue?

5 DR. EFFER: A. I can only record that
6 there are generic broad social issues and then there
7 are social issues which come to bear at a local level.
8 I think Mr. Shalaby's referring to the social impacts
9 which do come to the fore when siting becomes more
10 specific.

11 Q. All right. Dr. Effer, looking at
12 page 8 which is interrogatory No. 8.4.43 --

13 THE REGISTRAR: And that is 475.26.
14 ---EXHIBIT NO. 475.26: Interrogatory No. 8.4.43.

15 THE CHAIRMAN: Thank you.

16 MS. MARLATT: Q. This is an
17 interrogatory from the North Shore Tribal Council
18 asking Ontario Hydro what the comparison is of combined
19 cycle generation facility to the social impacts of a
20 CSC coal or IGCC generation facility.

21 There we are told, as Mr. Shalaby has
22 stated, that the types, magnitude and significance of
23 social impacts would be identified as part of
24 individual project-specific environmental assessments.

25 So, Dr. Effer, would it be correct to

1 state that this panel has no evidence to give on the
2 comparison of social impacts from different types of
3 fossil fuel facilities?

4 DR. EFFER: A. We have not presented
5 such evidence.

6 Q. Thank you. And at the same time, Dr.
7 Effer, you do not compare social impacts resulting from
8 fossil fuel facilities to social impacts resulting from
9 alternative technologies, correct?

10 A. We haven't done that, no.

11 Q. Moving into the area of economics,
12 again, Dr. Effer, you are not an expert on the area of
13 economic impacts, are you?

14 A. No.

15 Q. Thank you. Is anyone else on the
16 panel an expert in the area of economic impacts? No?

17 A. Apparently no.

18 Q. Thank you. All right. Dr. Effer,
19 you provided no evidence specifically on the economic
20 impacts of a fossil fuel facility on First Nations;
21 correct?

22 A. That is correct, yes.

23 Q. No evidence has been provided by this
24 panel on targets and strategies used by Hydro to employ
25 First Nations' people on these types of facilities;

1 correct?

2 A. Are we still on health effects?

3 Q. No. We have moved into the area of
4 economics.

5 A. Economics.

6 MR. SHALABY: A. On which we have no
7 expert, but --

8 Q. Thank you. I recognize that, Mr.
9 Shalaby, but I am just looking for a very specific
10 answer here.

11 Did you in your testimony or in your
12 background material refer to targets and strategies
13 that will be used by Ontario Hydro to employ First
14 Nations' people on fossil fuel facilities?

15 Now, this has been a topic of previous
16 panels, so I am looking for a very specific answer
17 just with regard to fossil fuel facilities.

18 A. We did not specify any such
19 information here.

20 Q. Thank you.

21 A. That doesn't say the evidence doesn't
22 contain it, but I think the evidence contains Ontario
23 Hydro policies with respect to various Aboriginal
24 issues, including --

25 Q. In a general sense; is that correct,

1 Mr. Shalaby?

2 A. Yes, that is correct, yes.

3 Q. Dr. Effer, you have not testified
4 then on the impacts of fossil fuel technologies on
5 areas such as tourism; correct?

6 DR. EFFER: A. Correct, yes.

7 Q. And further, with respect to
8 alternative technologies, you have not testified or
9 provided any documentation on the economic impacts of
10 alternative technologies, correct?

11 A. That is correct.

12 Q. Thank you. I have some questions in
13 the planning process area and I am going to refer these
14 questions to Dr. Effer, but if Mr. Shalaby feels he
15 would like to provide an answer, please feel free to.

16 Dr. Effer, you have not testified on any
17 siting considerations regarding fossil fuel facilities;
18 correct?

19 A. Not in a specific sense, no.

20 Q. In your testimony before us as Panel
21 8, have you testified at all with regard to siting
22 considerations?

23 MR. SHALABY: A. No.

24 Q. Thank you. And therefore, there
25 would be nothing on candidate sites or site categories,

1 correct?

2 DR. EFFER: A. That is correct.

3 Q. Thank you. Dr. Effer, have you
4 reviewed the evidence of Panel 6 on exclusionary
5 criteria for considering the hydraulic potential in the
6 province?

7 A. I am aware of, in a general sense,
8 this work, yes.

9 Q. All right. And you have not used
10 that type of analysis with respect to fossil fuel
11 facilities as you presented your evidence to this
12 Board; correct?

13 A. We have no occasion to actually use
14 those criteria on a project, a fossil plant project
15 yet, but we would use similar criteria for fossil
16 plants.

17 Q. All right. But you are not
18 testifying on what those criteria would be, are you,
19 Dr. Effer?

20 A. No.

21 Q. Thank you. In fact, in your
22 testimony, Dr. Effer, you did not address the question
23 of whether there would be any areas of the province
24 that are acceptable for new fossil fuel facilities,
25 correct?

1 A. I didn't provide that evidence, no.

2 Q. So just as a further question to
3 that, you would not have considered then whether
4 certain areas of the province would have to be excluded
5 based on existing environmental conditions, right?

6 A. I didn't bring up the subject of
7 siting, so exclusion or non-exclusion didn't come into
8 it.

9 Q. Thank you. Moving into the area of
10 Aboriginal communities, Dr. Effer, you are not
11 qualified to testify on the impacts of fossil fuel
12 facilities on Aboriginal people, correct?

13 A. Correct.

14 Q. And no one else on the panel would
15 be?

16 MR. SHALABY: A. That is correct.

17 Q. Thank you. Have you met with the
18 Aboriginal Committee of Vice-Presidents within Ontario
19 Hydro?

20 DR. EFFER: A. No, I have not.

21 Q. Have you, Mr. Shalaby?

22 MR. SHALABY: A. Not as a committee, but
23 I met with some of the individuals.

24 Q. Dr. Effer, have you ever read the
25 Robinson Huron Treaty?

1 DR. EFFER: A. No, I have not.

2 Q. Mr. Shalaby?

3 MR. SHALABY: A. I have not.

4 Q. Thank you. Referring to page 11,
5 this is an excerpt from Exhibit 468, page 66 of that
6 exhibit, figure 5.11, and that is materials relating to
7 environmental and health effects of fossil generation.

8 And Dr. Effer, this figure is described
9 as Eastern North America showing approximate areas
10 shaded of high sulphur dioxide and nitrogen oxide
11 emissions that cause acid rain.

12 Now, I have written in above the two
13 areas in Northern Ontario north of Lake Superior and
14 north of Lake Huron.

15 Can you identify those areas on your map?

16 DR. EFFER: A. Yes, I can.

17 Q. All right. Are you aware that those
18 two shaded areas are also areas of concentration for
19 our First Nations communities in Northern Ontario, Dr.
20 Effer?

21 A. I am aware of that, yes.

22 Q. All right. Are you aware of whether
23 or not there are any community impact statements with
24 regard to First Nations on fossil fuel facilities?

25 A. I believe some community impact

1 studies were carried out at Atikokan.

2 Q. With regard to the First Nations in
3 the area?

4 A. No, in a general sense.

5 Q. All right. Thank you. Are you aware
6 of whether or not there are any studies on the cultural
7 impacts of fossil fuel facilities on First Nations?

8 A. No, I am not.

9 Q. Thank you. Are you aware of the
10 importance of fishing to First Nations?

11 A. Very much so.

12 Q. Thank you. Looking at the
13 information that you have on fish impacts from existing
14 fossil fuel facilities, could you tell me whether or
15 not that data could be extrapolated to other sites on
16 other lakes?

17 A. Not readily.

18 Q. Thank you. Dr. Effer, you are not
19 aware of any studies specifically on the impacts of
20 fossil fuel facilities on species such as whitefish and
21 sturgeon, are you?

22 A. Yes, I am.

23 Q. Could you please tell me what those
24 are?

25 A. We have a population of whitefish,

1 lake whitefish and round whitefish opposite our
2 Darlington generating station on Lake Ontario.

3 We have conducted extensive studies both
4 in the field and in the laboratory on the effects of
5 thermal discharges on the fall spawning nature and the
6 development of eggs of that fall spawning species.

7 Q. All right. Dr. Effer, would you
8 undertake to provide me with that study?

9 A. I can give you reports. We have
10 reports on that.

11 Q. Could we make that into an
12 undertaking, Mr. Chairman?

13 THE CHAIRMAN: 478.?

14 THE REGISTRAR: .20.

15 THE CHAIRMAN: Thank you.

16 ---UNDERTAKING NO. 478.20: Ontario Hydro undertakes to
17 provide studies both in the field and in
18 the laboratory on the effects of thermal
19 discharges on the fall spawning nature
20 and the development of eggs of that fall
21 spawning species.

22 MS. MARLATT: Q. Dr. Effer, do you have
23 similar information on sturgeon?

24 DR. EFFER: A. Not effects of fossil
25 stations, no.

26 Q. All right. Are you aware that at the
27 mouth of the Mississagi River on the North Channel is a

1 sturgeon spotting ground?

2 A. Yes.

3 Q. Thank you. Moving into the area of
4 general questions, the alternative energy review does
5 not examine the cogeneration potential of existing
6 thermal station stations; is that correct? I believe
7 this would be Mr. Shalaby.

8 MR. SHALABY: A. That is correct.

9 Q. Thanks. Is there any document that
10 addresses this issue?

11 A. You wanted the cogeneration potential
12 as in using heat for what purpose? What do you have in
13 mind?

14 Q. Well, I am interested in whether or
15 not there is any document that specifically addresses
16 the issue of cogeneration potential within a fossil
17 fuel facility.

18 MR. DAWSON: A. I can answer that.
19 There was some work done prior to 1983 that I was
20 involved in where essentially what we did was calculate
21 the cost of steam that could be made available from - I
22 am trying to remember - I think it is certainly fossil
23 and I think it was both fossil and nuclear states
24 within Ontario Hydro but that is a long time out of
25 date now. But it didn't look at the potential market,

1 it simply looked at the cost of steam that could be
2 made available from various sources at various
3 pressures and temperatures.

4 Q. All right. Thank you. Looking at
5 page 12 of Exhibit 491, this is page 73 from materials
6 relating to environmental and health effects of fossil
7 generation.

8 And under the heading Flue Gas and
9 Desulphurization (FGD) Wastes, it states that:

10 "Wet limestone scrubber wastes are not
11 classified as hazardous or industrial
12 chemical wastes under MOE Regulation
13 309."

14 And I am wondering what happens to those
15 waste solids.

16 Mr. Dawson?

17 [11:15 a.m.]

18 MR. DAWSON: A. We are currently
19 planning to market them as commercial gypsum for
20 wallboard manufacture at Lambton.

21 Q. Would that include the inerts from
22 limestone?

23 A. Yes.

24 Q. What are you doing with them right
25 now before you market them?

1 A. We don't produce any right now.

2 Q. All right. Mr. Meehan, looking at
3 page 13, and this is a transcript excerpt from Volume
4 108, page 18916, you state at line 10:

5 "Environmental control equipment that
6 has high capital costs are most suitable
7 for addition to generating units which
8 are operated for long periods of time or
9 base load units. High capital cost
10 equipment that is installed on peaking
11 units can render that unit uneconomic."

12 Mr. Meehan, if the result of adding
13 environmental control equipment is to make a peaking
14 unit uneconomic, then one of your choices could be just
15 not to use that type of facility for peaking; correct?

16 MR. MEEHAN: A. That's correct.

17 Q. Mr. Meehan, referring to page 14,
18 there is an extract there from Volume 108, page 18951,
19 line 20, and this was during your examination in chief,
20 you were asked by your counsel:

21 "You have mentioned it a couple of
22 times, can you amplify why it is that you
23 are not immediately installing the best
24 available technology as soon as possible?

25 And you answer is: "Well, the simple

1 answer to this is that we try to balance
2 the need for environmental protection
3 against the cost and the need for an
4 orderly installation program.

5 "Our practice with respect to this
6 balance has been changing towards a
7 greater emphasis on environmental
8 protection."

9 Then I would like to refer to the
10 following page, 16, and this is testimony provided by
11 Dr. Effer during cross-examination by Mr. Greenspoon,
12 and this is from Volume 112, page 19511, line 15. You
13 are asked:

14 "There is some technology out there
15 and if it's too expensive but it will do
16 better from the environment, you don't
17 necessarily go for that best technology?"
18 Your answer was: "We decide on what is
19 the economically attractive alternative
20 and which will conform to the
21 regulations."

22 On the next page, 17, page 19582, you are
23 asked at line 18:

24 "So you are going to put out 5,000
25 tonnes that you could stop with scrubbers

1 and you are not going to put the
2 scrubbers on because it's not economic?"

3 And your answer was: "We are not
4 putting the scrubbers on because we are
5 not required to do that to meet the
6 environmental regulations that we have."

7 Going back to the first transcript
8 reference there, Mr. Meehan, is it accurate then to
9 state that Hydro policy is to meet its requirements
10 under provincial law?

11 A. That's certainly one of our policies,
12 yes. I think what I was trying to indicate in this
13 part of my testimony was that we are moving from that
14 exact definition to one that is going to permit us to
15 anticipate changes in regulation and to perhaps install
16 environmental equipment ahead of when they might be
17 installed to meet regulations.

18 Q. So the concern or the objective in
19 that case then is to foresee what the regulations are
20 going to state?

21 A. That would be one of the objectives,
22 yes.

23 Q. Do you have any instances where you
24 have done that prior to a regulation coming into effect
25 with regards to environmental controls on fossil fuel

1 facilities?

2 A. Perhaps Dr. Effer would have better
3 examples of that.

4 Q. Dr. Effer?

5 DR. EFFER: A. We are dealing quite a
6 lot with the regulatory agencies at the moment on the
7 discharges to water and a program which we have already
8 mentioned, MISA, Municipal Industrial Strategy for
9 Abatement, and there we are anticipating regulations by
10 doing studies within the plants in order to meet what
11 we believe will be the likely regulations placed on us.

12 Q. So your emphasis there is on the
13 regulations that are coming up; correct?

14 A. That are not yet formulated but are
15 expected.

16 Q. That's your objective; correct?

17 A. Yes.

18 MS. MARLATT: Thank you.

19 Those are all my questions, Mr. Chairman.

20 THE CHAIRMAN: Thank you, Ms. Marlatt?

21 I gather that Mrs. Mackesy is also
22 prepared to accommodate AECL. She is not here right at
23 the moment. Perhaps we could take the morning break at
24 this point. We will break now.

25 THE REGISTRAR: Please come to order.

1 The hearing will take a 15-minute recess.

2 ---Recess at 11:20 a.m.

3 ---On resuming at 11:40 a.m.

4 THE REGISTRAR: Please come to order.

5 This hearing is again in session. Be seated, please.

6 MRS. MACKESY: My first group of
7 questions have to do with fossil options, the second
8 groups with the alternatives, and the third with recent
9 developments connected with the Bruce Nuclear Power
10 Development. At this time I have no interrogatories to
11 handout.

12 CROSS-EXAMINATION BY MRS. MACKESY:

13 Q. My first questions refer to Mr.
14 Dawson's evidence about Ontario Hydro having
15 environmental assessment approval to acquire additional
16 land for waste disposal for both flyash and FGD waste
17 at Lambton, Nanticoke, and Lakeview, and I believe this
18 was during AMPCO's cross-examination in Volume 111. Do
19 you recall that?

20 MR. DAWSON: A. I recall making that
21 statement, yes.

22 Q. Now, when you say you have approval
23 to acquire additional land for waste disposal, does
24 that approval relate to land adjustment to the fossil
25 station property or can it be located almost anywhere?

1 A. I should perhaps clarify that it
2 doesn't apply to land for Lakeview.

3 Q. It doesn't apply to land for
4 Lakeview?

5 A. No. The environmental assessment
6 approval that we achieved applies to Lakeview and
7 allows us to build scrubbers at Lakeview, but we didn't
8 specifically ask for the approval of additional land
9 for disposal of waste products at Lakeview, but we did
10 for Lambton and we did for Nanticoke, and the areas
11 were laid out in maps that were part of the
12 environmental assessment document, and they are
13 adjacent to the existing property, yes.

14 Q. Now, with regard to Lakeview, does
15 the fact that you haven't got extra land there make it
16 more difficult to install the scrubbers?

17 A. It's a tight site anyway and
18 therefore just the physical placement of the scrubber
19 itself would be difficult, though not impossible, and
20 certainly the fact that we don't have any land for
21 waste dispose at Lakeview is another factor in that
22 decision it, too. The third factor is the fact that
23 Lakeview doesn't run nearly as much as Lambton or
24 Nanticoke.

25 Q. You say you got environmental

1 assessment approval for Lambton and Nanticoke. At that
2 time did you ask for extra land with regard to
3 Lakeview?

4 A. No, we did not, no.

5 Q. May I ask why?

6 A. Well, simply because there isn't any
7 land that's adjacent to the existing site.

8 Q. What is around the site?

9 A. I beg your pardon?

10 Q. What is around the site?

11 A. It's developed. There is light
12 industrial facilities around the site and therefore
13 there is no land that's available for waste disposal in
14 the immediate vicinity of Lakeview.

15 DR. CONNELL: There is a nice golf course
16 there that you might apply for. [Laughter]

17 MR. DAWSON: I am sorry, Dr. Connell?

18 DR. CONNELL: I was suggesting the golf
19 course.

20 MRS. MACKESY: Q. So the situation is
21 that the land was in uses that you didn't want to
22 disturb by applying for it?

23 MR. DAWSON: A. That's right.

24 Q. When Ontario Hydro decides to life
25 extend a fossil facility, does that decision take into

1 account whether the facility is in a region having too
2 little generation supply as compared to the load demand
3 in the area? I am not quite sure to whom to address
4 that?

5 MR. MEEHAN: A. I can't say that that
6 idea was specifically dealt with in the life extension.
7 Again, because it's so far into -- what we do, the
8 additional 10 years is quite far into the future, and
9 the existing system is in place right now for that
10 generating station, so I cannot say that that was one
11 of the things that was considered.

12 Q. Would you consider that in future
13 life extension considerations?

14 A. Perhaps I am not understanding the
15 question because I am wondering the relevancy of it.

16 Q. I will go onto the next question
17 then, perhaps that will help with that.

18 If the facility is in a region that has
19 too little generation supply and at the same time also
20 is in a region that has inter-area transmission
21 constraints in bringing electricity into that area, do
22 you consider that situation when making a decision on
23 life extensions?

24 A. I suppose the answer to that is yes,
25 and we would consider that type of thing as well if we

1 were to add new generation to the system, that would be
2 one of the things that we would consider.

3 Q. But you haven't done that yet?

4 A. No, we would do that when we are into
5 a specific project type of work, I would think.

6 Q. I'm not speaking to the new
7 generation at this point. I am thinking of the
8 Lakeview situation.

9 A. A generating station that retires
10 doesn't mean that there wouldn't be generation on that
11 site beyond that retirement date, if that's the kind of
12 thing you are getting at.

13 We could, by retiring the Lakeview
14 generating station, for example, find that it was a
15 good location for combined-cycle generation or
16 something like that. So because the station is retired
17 it doesn't mean to say we wouldn't redevelop the site.

18 Q. I see. Just let me ask one for
19 clarification question then. When you decide not to
20 continue with or not to rehabilitate a plant and not to
21 life extend it, you are then into a retirement
22 situation?

23 A. We would be into a retirement
24 situation for the station, yes.

25 Q. At that time you would possibly use

1 the site for future generation?

2 A. We could or we could sell it or do a
3 number of things with it. But one of the things we
4 could do with it would be to redevelop it to another
5 generating station.

6 Q. Would the situation regarding the
7 balance between generation and transmission in the area
8 be one of the influences --

9 A. Yes, it would be at that time. It
10 certainly would be.

11 Q. Now, Mr. Smith, the next question is
12 one of clarification for you and this regards an answer
13 that you gave Ms. Patterson regarding fuel supply to
14 Hearn. This appeared in Volume 110 at page 19232, I
15 believe. It's lines 3 to 8.

16 MR. SMITH: A. Sorry, I don't think I
17 have the right page reference.

18 Q. 19232.

19 A. Yes.

20 Q. Actually, beginning at line 5:

21 "Hearn, for example, was considered
22 that fuel supply would probably be the
23 biggest constraining factor to get
24 natural gas supply re-established for
25 Hearn in time for a restart."

1 Could you tell me what you mean by the
2 "biggest constraining factor"?

3 A. It was related to lead time on the
4 decision between the time when we would need the unit
5 and the time to get it back in-service. That was a
6 plant that had in fact been running on natural gas in
7 the past and the pipeline and everything is there to
8 serve the plant.

9 However, in the decision to return it to
10 service we would not have arranged any gas supplies,
11 and the backing it up through the system of gas supply,
12 the constraining factor is in fact getting
13 transportation from gas from Western Canada through the
14 TransCanada PipeLine system on a reliable basis, and so
15 we were looking at a lead time of up to three years to
16 be able to do that. I think the previous witnesses
17 have testified about 18 month lead times or up to two
18 years to get the plant staffed and removing asbestos
19 and things like that.

20 Q. Thank you.

21 My next question is another point of
22 clarification and this regards Mr. Dawson's evidence on
23 repowering during AMPCO's cross-examination.

24 By repowering does that mean getting a
25 greater amount of electricity out of the existing unit?

1 MR. DAWSON: A. Yes, it does in the
2 sense that what you would do is convert it to
3 combined-cycle generation that I described by adding a
4 gas turbine ahead of the steam turbine, add a gas
5 turbine and a heat recovery boiler and supply steam to
6 that existing steam turbine from that heat recovery
7 boiler, and could you theoretically increase the output
8 by a factor of 200 per cent.

9 Q. If that energy is not used locally
10 you would need transmission to carry it away?

11 A. That's the difficulty, then you have
12 got to get the energy out of the station and that
13 probably means more transmission.

14 Q. Now, my questions relate to stack
15 emissions and flyash, Dr. Effer.

16 Do stack emissions contribute to soil
17 contamination?

18 DR. EFFER: A. Yes.

19 Q. Would you please turn to Exhibit 468,
20 please 46, please. This is a figure entitled
21 Environmental Pathways, figure 4.2, in the materials
22 relating environmental health and health effects of
23 fossil generation. Now, in the third horizontal line
24 from the top there is an item labelled Soil
25 Concentration.

1 A. Right, I see that.

2 Q. And running down from that line, from
3 that item is a line labelled Soil Ingestion. Do you
4 see that?

5 A. Yes.

6 Q. What does Ontario Hydro mean by soil
7 ingestion?

8 A. Animals eat soil along with
9 vegetation and that is assumed to be the pathway that
10 the elements will take in going from the soil to the
11 animals.

12 Q. Okay. Now, on Monday, Northwatch
13 asked you some questions regarding your direct evidence
14 about the use of flyash as a soil additive. I believe
15 your final statement was that you doubted very much
16 that it would be used in soil for growing crops for
17 human consumption. My question is: In view of the
18 fact that animals ingest soil, do you see flyash as
19 being used as an additive for agricultural lands
20 supporting animals that are part of the human food
21 chain?

22 A. Flyash can be useful for modifying
23 poorly constructed soils, it can make it more open, and
24 I believe there are instances where experiments are
25 being done on growing food stuffs, various crops on

1 ash-fortified soils. I don't know in detail of the
2 results of those studies of how much of the elements in
3 the flyash are absorbed into vegetation.

4 Q. Are you changing your answer then
5 with regard to what you told Northwatch?

6 A. No, I am saying that the experiments
7 are taking place and I was expressing an opinion there,
8 under some conditions, under certain types of soil the
9 ash might fortify a deficiency in a particular soil in
10 which case it wouldn't find its way as an excess
11 element into vegetation.

12 Q. Might it depend on the type of
13 vegetation?

14 A. Yes, very much so.

15 Q. Crops or...

16 A. Yes. Some crops concentrate elements
17 in their tissues, and again that depends again on the
18 type of crop and the type of soil.

19 Q. To go back to the soil ingestion
20 situation with animals ingesting soil such as dairy
21 cattle when they are grazing, my question was: Do you
22 see the flyash being used as an additive for
23 agricultural lands supporting that type of food
24 production?

25 A. I think it would have to be done only

1 after ensuring that the additive, the amount of
2 additive to the soil, amount of ash added to the soil
3 and also the process of absorbing the materials from
4 the soil and the flyash into the vegetation, I think
5 experiments certainly would have to be done before that
6 was adopted.

7 [11:55 a.m.]

8 Q. I think we may be talking at cross
9 purposes. I am not referring to the ash being or the
10 additives from the ash being taken up by the
11 vegetation. I am referring to the fact that the soil
12 itself is eaten by the animal. It picks up the soil as
13 it is grazing so it is taken into its body along with
14 whatever contaminants are in the soil.

15 A. Yes, that is true, the animal takes
16 up whatever is in the soil.

17 Q. So in a situation like that, might it
18 be a wise precaution just not to add the additives?

19 A. Again, it depends on whether the ash
20 provides supplementary elements to the soil or whether
21 it is adding elements which would be in excess and
22 would find their way into the animal and absorbed by
23 the animal.

24 Q. If you were to use the additives in
25 that fashion or the flyash in that fashion, you would

1 have to have some sort of monitoring process then to
2 see that no difficulties arose.

3 A. As I said, I think that comprehensive
4 experiments would have to be done before it were used
5 as a soil additive.

6 Q. Would this be just a one-time
7 experiment situation where having tested the material
8 once, you wouldn't go back to it for five or ten years,
9 to testing it?

10 A. I think we would have to wait to see
11 the actual situation before we decided on the intensity
12 of the experiments.

13 Q. Okay. Now I would like to ask the
14 panel about some evidence given by a previous panel
15 with regard to sites for large stations. I am not sure
16 to whom to address this. This was in Volume 104 at
17 page 18410.

18 I will just give the background on the
19 statement. It was made by Dr. Macedo in Panel 7 with
20 regard to large stations during cross-examination by
21 the Government of Ontario on the topic of a connection
22 between transmission and generation planning. And as
23 part of one answer, Dr. Macedo said at lines 11 to 13
24 on page 18410 of Volume 104 that:

25 "The number of sites obviously in a

1 certain part of the province" -- I will
2 go back -- "the number of sites obviously in a certain
3 part of the province are limited, this is
4 for large stations."

5 And my question is: Could you comment on that idea
6 with regard to fossil sites, and that is, are the sites
7 limited in certain parts of the province for large
8 fossil stations? As I say, I am not quite sure to whom
9 to address that.

10 MR. SHALABY: A. Well, having not
11 discussed siting in this panel, I will still refer to
12 you chapter 14 of Exhibit 3 which identifies what we
13 call representative or illustrative sites for large
14 fossil facilities and large nuclear facilities.

15 Q. I suppose what I am doing is asking
16 for the selection process behind that.

17 You don't want to address that on this --

18 A. It is not part of the scope of
19 testimony we gave.

20 Q. My next questions have to do with
21 municipal solid waste and -- I am sorry.

22 THE CHAIRMAN: There are some general
23 characteristics of large fossil plants like the
24 desirability of being near water, for example; is that
25 not right?

1 MR. SHALABY: Yes. And that is described
2 in chapter 14, the cooling water requirements and the
3 land area requirements and various other generic
4 desirabilities for large generating sites.

5 MRS. MACKESY: Q. I have come to the end
6 of my section on fossil generation and I am moving on
7 now to the alternative energy sources. The first
8 question deals with municipal solid waste incineration.

9 Is the entire solid waste stream
10 incinerated including things such as old stoves and
11 washing machines or is part of this solid waste still
12 sent to landfill along with the ashes?

13 MR. DAWSON: A. Things like old stoves
14 and washing machines would not be put into an
15 incinerator. There is nothing that is combustible
16 there, I mean, it is more valuable to be recycled to
17 the metal industry so that certainly wouldn't be
18 incinerated, but virtually everything else could be and
19 typically, in European practice has been.

20 Now, of course, recycling programs are
21 starting to remove some of the things like tin cans out
22 of there, but they can be separated out of the ash,
23 too. That is another approach that has been used to
24 use a magnetic separation system on the residue from a
25 municipal solid waste incinerator and recover steel in

1 that way.

2 Q. This would vary from project to
3 project then?

4 A. It tends to, yes.

5 Q. Is there a day-to-day fluctuation
6 supposing the amount of waste going to the incinerator
7 exceeds the capacity for a particular day? Are there
8 situations where that type of waste goes into landfill
9 also then?

10 A. The municipal solid waste
11 incinerators usually have a very large storage pit and
12 then the material is taken out of that and they would
13 normally have two or three days storage capacity. So
14 you would have had to have filled that capacity before
15 you would be in a situation where you would have to
16 take it off to a landfill.

17 But having said that, I think it would be
18 not a very wise decision to build an MSW incinerator
19 that exactly matches the theoretical refuse capacity of
20 the community. You want something that is less than
21 that so that you have got an assured supply of refuse.
22 You certainly don't wanted to be undersized as some of
23 the plants that were described yesterday seem to be.

24 Q. Now, my next question has to do with
25 the generation from peat. I think that is your area,

1 Mr. Shalaby.

2 Could you please turn to page 123 of the
3 Alternate Energy Review. On this page, there is a
4 figure labelled "Peat Deposits, Ontario". Now, this
5 consists of a map. And on that map below the Bruce
6 Peninsula, there is a vertical dark spot that looks as
7 though it might be the Greenoch Swamp. And south of
8 Georgian Bay, there are some lighter dots that look as
9 though they might represent swamps in Grey County.

10 I have a general question: How does
11 Ontario Hydro reconcile harvesting peat from swamps
12 with the concern about wetland preservation?

13 A. I think we recognize that it is an
14 environmental concern and it is something that would
15 have to be looked at. And if Ontario Hydro, as a
16 proponent, got into a specific peat project, it is
17 certainly something that we would look at very
18 carefully before deciding to go ahead or not.

19 But I think we see peat generation as
20 being more non-utility generation because it is likely
21 to be small size and, therefore, it would be the
22 responsibility of the non-utility generation proponent
23 to deal with the environmental issues associated with
24 that project through the Ministry of the Environment.

25 Q. Do you know whether there is any

1 obligation on them to do that?

2 A. There are certainly obligations under
3 the Environmental Protection Act, I think, to obtain
4 permits and approvals for that sort of a project.

5 Q. One would have to go to the Ministry
6 of the Environment to get more information on that?

7 A. Yes.

8 Q. My next question is about biomass
9 plantation electricity. Would you please turn to page
10 102 of Exhibit 344.

11 The figure on that page is labelled
12 4-2-4, conceptual plantation management unit, composed
13 of, I believe, 10,000 hectares according to the
14 information at the bottom of the illustration. This
15 looks as though it might take up about a half or a
16 third of a township.

17 Has Ontario Hydro considered the
18 economics of a 15 megawatt plantation biomass plant if
19 it were fueled from tree plants which individual
20 farmers would have on their own farm properties, maybe
21 only 5 or 6 acres in size and were managing them in
22 conjunction with other farm practices?

23 A. I am sorry, I didn't quite get all of
24 the question. Have we looked at?

25 Q. The illustration on page 102 takes up

1 a sizable piece of property.

2 A. Right.

3 Q. I am thinking of a situation where a
4 farmer has 5 or 6 acres that he would like to put into
5 a plantation, not his whole property, his whole 100
6 acres or whatever.

7 A. Right.

8 Q. And if there were a number of farmers
9 in an area doing that sort of thing; has Ontario Hydro
10 looked at that situation? Does that fit in with a 15
11 megawatt --

12 A. Yes. The net effect would be that
13 you would increase the area over which you have to
14 transport wood and, therefore, the costs of the fuel
15 would go up and it would tend to be less economic.

16 What we tried to do here is be somewhat
17 optimistic about the whole process and come up with
18 what we think are fairly optimistic estimates. And on
19 that basis, we have looked at fairly concentrated
20 supply of wood.

21 Q. Have you any idea how large an area
22 would be required --

23 A. I think we said in the direct
24 evidence that for 15 megawatts for plantation biomass
25 using willow, it translates to 6,000 hectares, which is

1 60 square kilometres.

2 Q. So you would have to distribute that
3 6,000 hectares over --

4 A. So, it is somewhat less than the area
5 shown in this diagram. If you use plantation willow,
6 it is a little more than half.

7 Q. If you were using only 5 or 6 acres
8 per 100 acres, you have a larger area.

9 A. Thank it would, yes, that's right.
10 This assumed 82 per cent utilization for plantation.

11 Q. 82 per cent?

12 A. Yes.

13 Q. Thank you. My next questions are on
14 wind power. And Mr. Shalaby, this involves your direct
15 evidence in Volume 109 at page 19123. The section I am
16 interested in begins at line 7 and I will read that.
17 This was with regard to sites for wind generation:

18 "The land has to be available for wind
19 developments. For example, while the
20 shores of the Great Lakes are windy I
21 don't know to what extent those lands
22 would be available for wind farm
23 developments. So if the price of the
24 land is right and it's available for
25 development, close to transmission, if we

1 can identify enough sites like that there
2 will be more widespread wind generation
3 in Ontario."

4 First of all, I would like to ask you
5 what you mean by the section, "if the price of the land
6 is right and it is available for development". Does
7 this relate to the same types of concerns that Mr.
8 Dawson spoke about with regard to Lakeview?

9 MR. SHALABY: A. No. It just says if
10 people can secure the rights to using the land for wind
11 generation. Typically, wind developers would not
12 necessarily want to own the land outright. Some places
13 they just make a deal with the landowner to use parts
14 of it and to use the wind rights to it. So, people can
15 either buy the land outright or they can make a deal
16 with the landowner to just use the wind sites on it.

17 So, what I am saying here is that the
18 land costs, if they are not too high, it will make wind
19 developments more favourable. If the land costs are
20 very high, it will work against the economics of wind
21 generation.

22 Q. Okay. How would Ontario Hydro
23 respond to a situation where the price of the land was
24 right and it was available for development but it
25 wasn't in an area of need?

1 A. Again, typically if it is in an area
2 close to transmission, there may be something workable
3 there, but if it is away from transmission and away
4 from an area of need, then the costs will be higher.

5 Q. Okay. Going on then to the idea of
6 close to transmission, does that give any assurance
7 that there will be room on that transmission for the
8 new generation?

9 A. Not necessarily. But again, we are
10 speaking with smaller amounts of generation initially
11 and usually you can squeeze a few megawatts here and
12 there on an existing transmission.

13 As we said, if we think of massive
14 developments, the considerations could be different,
15 but if we are thinking of small pockets of wind farms,
16 in all likelihood their energy can be absorbed into the
17 electricity system.

18 Q. So even if a site is close to
19 transmission, you might have to build. In the case of
20 a large development, you might have to build a 100-mile
21 long transmission line?

22 A. Yes.

23 Q. Weather area or inter-area or radial?

24 A. Yes.

25 Q. Okay.

1 A. And in fact, some of the California
2 developers have had to do exactly that. They build a
3 dedicated line from the wind farms into the Los Angeles
4 area.

5 Q. Okay. Now, the next questions are
6 follow-up to your answer this morning to Mr. Thompson
7 in which you mentioned wind farms on the Bruce
8 Peninsula.

9 Can you be more specific about the
10 location of those wind farms in relation to the Bruce
11 Peninsula?

12 A. I am not sure how proprietary or
13 otherwise. I don't think there is a proprietary
14 consideration on that, but perhaps we can check with
15 the people who are thinking of that development and if
16 they have no objection to releasing who they are, I can
17 communicate that to you.

18 Q. I am interested in where the facility
19 would be located.

20 Would that also be something that you
21 would try to obtain?

22 A. I will see what I can do there, yes.

23 Q. Okay. I have a number of other
24 questions related to this so I will go through them
25 all at this time.

1 Can you give me some idea about the
2 number of megawatts of electricity it is anticipated
3 that this project would produce?

4 A. No, I don't have a specific number,
5 but it would probably be in the 10 megawatt to 50
6 megawatt range if it comes to fruition.

7 Q. Can you speak to the transmission
8 implications of this project?

9 A. Not in detail, no, but again, it is
10 unlikely that it will materialize if it requires
11 additional transmission.

12 Q. Okay. If there were a situation
13 where additional transmission were acquired and the
14 proponents wanted to go ahead with it and Ontario Hydro
15 was willing to go ahead with it, would there then be
16 environmental assessments and hearings into the
17 required transmission?

18 A. I would suspect that, yes.

19 MRS. MACKESY: Mr. Chairman, I would like
20 an undertaking to get what information I could on this
21 project.

22 THE CHAIRMAN: He can only do it if he
23 feels he is free to do it; otherwise, he doesn't think
24 he can tell you. See, he has got to find that out.

25 MRS. MACKESY: Okay.

1 THE CHAIRMAN: But if you want to put a
2 number on it, we can put a number on it so that we
3 don't lose track of it.

4 478?

5 THE REGISTRAR: .21.

6 MRS. MACKESY: Thank you.

7 ---UNDERTAKING NO. 478.21: Ontario Hydro undertakes to
8 provide information about the location of
9 wind farms in relation to the Bruce
Peninsula.

10 MRS. MACKESY: Q. My next questions deal
11 with the relationship between fuel cells, hydrogen
12 nuclear electricity and transmission.

13 And I believe that in Exhibit 344, the
14 Alternate Energy Review, Ontario Hydro has concentrated
15 on hydrogen's fuel for fuel cells as being derived from
16 fossil fuels; is that correct?

17 MR. SHALABY: A. Yes.

18 Q. Okay. I believe that you mentioned
19 somewhere in this panel that in the early '80s, studies
20 were done on deriving hydrogen from the electrolysis of
21 water?

22 A. That's correct.

23 Q. And what were the reasons that you
24 gave for not carrying on with that option into this
25 energy review?

1 A. It is more expensive than hydrogen by
2 reforming natural gas.

3 [12:15 p.m.]

4 Q. Can you confirm that some of those
5 studies from the early 80s for obtaining hydrogen from
6 the electrolysis process, in those studies the
7 electricity came from nuclear plants which were to be
8 dedicated to that purpose or used for that purpose in
9 off-peak times?

10 A. In all likelihood you're right there,
11 but I cannot be sure. I think the scheme was using
12 off-peak electricity. Mr. Dawson confirms that it was.

13 Q. Thank you.

14 And can you confirm that in some of these
15 studies transporting the hydrogen by pipeline from the
16 nuclear plant to the place of use was seen to have
17 difficulties?

18 MR. DAWSON: A. I think we looked more
19 at transporting the electricity to the place of use and
20 then generating the hydrogen at the place of use rather
21 than pipeline transportation.

22 Q. So then this system would require
23 transmission lines if the plants weren't in the place
24 of use?

25 A. If the transmission lines didn't

1 already exist, yes.

2 If you were using off-peak power than it
3 may be that there was already a sufficient supply line
4 into the place of use to supply the electrolysis
5 facility during off-peak power requirements.

6 Q. Depending on the inter-area
7 transmission problems?

8 A. Yes. But otherwise, yes, you would
9 need additional transmission.

10 MR. SHALABY: A. Just for completeness,
11 you perhaps are aware that the report on hydrogen was
12 attached to Interrogatory 8.15.12.

13 THE REGISTRAR: 8.15.12, that will be
14 475.27.

15 THE CHAIRMAN: Thank you.

16 ---EXHIBIT NO. 475.27: Interrogatory No. 8.15.12.

17 MRS. MACKESY: Q. Now, I am moving on to
18 the third part of my cross-examination, and this has to
19 do with recent proposals for generation development
20 connected with the Bruce Nuclear Power Development and
21 the adjacent Bruce Energy Centre.

22 I heard of these proposals after the due
23 date for the filing of the Panel 8 statement of
24 concerns on February 10, and on February 14 I submitted
25 an interrogatory to Ontario Hydro to find out what

1 information Ontario Hydro could give out on the
2 generation proposals and any associated pipeline
3 transmission facilities or other facilities.

4 On February 17 I gave Ontario Hydro a
5 newspaper article on the proposals, and on Monday the
6 24th I gave them a copy of the presentation made to the
7 Bruce County Council on February 11th by Sam MacGregor
8 of the Bruce Energy Centre. I understand that his
9 verbal presentation did not follow exactly the text of
10 the written presentation.

11 I haven't received an answer to the
12 interrogatory from Ontario Hydro, but we have discussed
13 the sorts of questions that I have connected with this
14 project, and I gave them a list of the questions and we
15 are going to work our way through them I understand. I
16 understand that some of these questions would be
17 referred to Panel 9. I am content with that.

18 Now, at this time I would like to enter
19 that February 11, 1992 presentation by Mr. MacGregor as
20 an exhibit, and I have given those copies to the clerk.

21 THE REGISTRAR: That will be 492.

22 MRS. MACKESY: Thank you.

23 ---EXHIBIT NO. 492: Presentation to the Bruce County
24 Council, February 11, 1992, by
25 Mr. Sam MacGregor.

THE CHAIRMAN: Who is Mr. MacGregor

1 again? I'm sorry.

2 MRS. MACKESY: He is connected with the
3 Bruce Energy Centre. I gather that he was one of the
4 early people involved with its formation. I don't have
5 his exact position.

6 Q. Now, to give the Board an overview of
7 what is proposed, would you please turn to page 14 of
8 the presentation, of Exhibit 492. This illustration is
9 labelled Public/Private Sector Natural Gas Cogeneration
10 Interface. Down in the lower right section of the page
11 are two proposed natural gas cogeneration non-utility
12 generators, which I assume to be at the Bruce Energy
13 Centre, and in the upper left section of the page is a
14 proposed natural gas cogeneration steam plant on the
15 Ontario Hydro Bruce Nuclear Power Development property.

16 Now would you turn to page 7, please, of
17 the same exhibit. I am going to read items (C) and (D)
18 at the top of the page. Just to go back to page 6, I
19 will read Mr. MacGregor's introduction to this section.

20 "The following is a list of initiatives
21 requested to be taken directly by Bruce
22 County."

23 As I said, I am reading (C) and (D) from
24 7.

25 "(C) Officially request the Ontario

1 Ministry of the Environment to include
2 the installation of a natural gas trunk
3 line in the Ministry's existing approval
4 for Ontario Hydro's electricity
5 transmission corridor from BNPD to Lobo.

6 (D) Officially request the Ontario
7 Ministry of Energy to encourage Union Gas
8 Company to complete the natural gas trunk
9 line within the next 12-18 months."

10 Next would you please turn to page 17,
11 the last page of Exhibit 492. This is a map which
12 shows the route of the transmission line mentioned in
13 section (C) which I have just read from page 7.

14 Now, could you please turn to page 12 of
15 Exhibit 492. This page doesn't have a label but it
16 seems to be an illustration of a three-stage
17 development proposal.

18 The 1991 stage showing the situation at
19 Bruce "A" on the upper level. In the middle section of
20 the page, labelled 1994, there is an addition, NUG #1,
21 apparently producing 133 megawatts of electricity, as
22 well as providing steam for the heavy water plant and
23 the Bruce Energy Centre.

24 In the middle section labelled 1994, the
25 Bruce Generating Station "A" is shown as having one

1 reactor shut down and it is labelled Extraction Steam
2 Unavailable.

3 At the bottom of the page in the lower
4 section, which is labelled Future, and I suppose refers
5 to the situation after 1994, there is a second 135
6 megawatt NUG illustrated, together with something
7 called future specifications, and they are not
8 specified.

9 Now, I would like to ask the panel a
10 series of questions about this proposal and the
11 background to it.

12 First of all, what knowledge do the panel
13 members have of this proposal for NUGs and the steam
14 plant at the Bruce Energy Centre and BNPD?

15 MR. SMITH: A. Mrs. Mackesy, I have some
16 general information or knowledge of the proposal mainly
17 because my function has been advising on gas supply
18 arrangements to that area, and because of your
19 expressed interest I have acquired some other general
20 information. I think I can try to answer your
21 questions but will probably reach my level of knowledge
22 pretty quickly and go past it pretty quickly, but I
23 will try to answer as many of your questions as I can.

24 Q. All right. Which division at Ontario
25 Hydro would know most about that? Would that be the

1 NUG division?

2 A. Well, this specific project, yes,
3 would be the NUGs division.

4 Q. You mentioned that you have knowledge
5 of the natural gas situation, and did you say proposals
6 for that project? Can you give me some information on
7 that?

8 A. We have been involved in -- Ontario
9 Hydro has, and my function has been involved in looking
10 at gas supply to the Bruce site and not specifically
11 related to the development of non-utility generation
12 projects, but as an alternative fueling for the Bruce
13 steam plant.

14 Not to get too far into that, but the
15 Bruce steam plant is a facility that in fact produces
16 steam for our heavy water plants on the site and also
17 for the Bruce Energy Centre, but it's a backup facility
18 to supplement steam that is normally produced from the
19 nuclear Bruce "A" plant at the site, and it produces
20 more steam than it uses to produce electricity so then
21 that steam is utilized for heavy water production and
22 for the Bruce Energy Centre.

23 So the steam plant is a backup facility
24 which currently runs on residual fuel oil, and Hydro
25 has been looking at what would be involved in changing

1 that to a natural gas fuel facility.

2 Q. And that is the item illustrated on
3 page 14 labelled Proposed Natural Gas Cogeneration
4 Steam Plant?

5 A. Well, right now it's -- I don't know
6 if there is another illustration. The previous page to
7 that shows a steam plant beside the heavy water plant.

8 Q. Yes.

9 A. That's what we have been involved in
10 looking at, and whether that would in fact later become
11 a cogeneration facility I'm not really aware of whether
12 we have been looking at that option or not.

13 Q. Okay. Can you give me any idea of
14 what the situation is with regard to the pipeline
15 bringing natural gas up to the area?

16 A. What we have looked at is what would
17 be required in the pipeline and where it would come
18 from, which would be the London area north. The
19 general concept I think is the idea of using the
20 existing right-of-way, but there has been no specific
21 look at, say, approvals to do that.

22 What we have done is looked at what the
23 cost of building a pipeline of the type we would need
24 would be, and we have estimated that at about \$140
25 million.

1 Q. So you haven't rejected the use of
2 the existing transmission right-of-way as a route?

3 A. That's right.

4 Q. I am going to come back to that later
5 but I will move on to the next portion of my questions
6 now.

7 What is the connection between BNPD and
8 the Bruce Energy Centre with regard to steam supplied?

9 A. I don't have much information on
10 that. The steam is supplied from the Bruce Complex to
11 the Centre. I believe there are commercial
12 arrangements associated with that, but beyond that I
13 don't have any information.

14 Q. Okay. Now, the next question has
15 some introduction to it. In Exhibit 6, and I don't
16 know that you need look at this, this is the plan
17 analysis, on page 4-44 there is a list of the major
18 planned fuel channel outages for Bruce "A", that would
19 be units 1 to 4, and I believe this refers to the
20 retubing of the Bruce "A" units; would I be correct in
21 that?

22 MR. BURPEE: A. Yes.

23 Q. Thank you. Now, on page 12 of
24 Exhibit 492, in the middle section labelled 1994, it
25 seems to suggest that there will be no steam available

1 from Bruce "A" with one reactor shut down for retrofit.

2 Can anyone indicate whether that is the situation or
3 should I be asking Panel 9 for that?

4 MR. SMITH: A. I think it should be
5 Panel 9 unless Mr. Shalaby knows the answer.

6 MR. SHALABY: A. No. I was going to
7 suggest that.

8 Q. Thank you. Perhaps this also is a
9 question for Panel 9 but I will ask it anyway. Is
10 there anywhere in the Ontario Hydro exhibits entered at
11 this hearing that would substantiate that, that anyone
12 on this panel knows of?

13 A. To substantiate...

14 Q. Whether or not that with one reactor
15 shut down at Bruce "A", there would be no steam
16 available.

17 A. I know Panel 9 answered in excess of
18 1,000 interrogatories. It's a safe bet there is
19 something in there.

20 Q. Fine, that's what I was wondering.

21 Another question, with one unit shut down
22 at Bruce "A", if this was causing a curtailment in
23 steam supply to the Bruce Energy Centre, could
24 replacement steam be produced at Bruce "B", or is that
25 another question for Panel 9?

1 MR. BURPEE: A. That I do know the
2 answer to, and right now, no, there is no facility for
3 it. I am not sure what arrangements could be made.

4 As far as the ability of one reactor
5 being shut down on curtailing the steam available, I
6 don't know for sure but I think it is highly unlikely
7 because they have had some boiler problems recently
8 that they have units shut down, as far as I know they
9 are still providing steam, so...

10 Q. To the best of this panel's knowledge
11 the steam would still be available.

12 MR. DAWSON: A. Perhaps the other point
13 to make is that we do have the steam plant that's
14 oil-fired which is there just to fulfill that
15 eventuality. If you lose the steam supply from the
16 nuclear reactor, there is the oil plant there to supply
17 steam to the heavy water plant.

18 Q. Are you having difficulties with that
19 plant?

20 A. Not that I am aware of, but that
21 doesn't mean that we haven't.

22 Q. I will ask Panel 9 about that.

23 MR. SMITH: A. I think the reason we are
24 examining gas supply is that if we are going through an
25 extended period of having reactors shut down for

1 retubing, then there will be less steam produced from
2 the nuclear side of the operation and consequently more
3 heavily relying on the Bruce steam plant to produce
4 steam.

5 Again, we don't have any of the details
6 of exactly that. I think this diagram is an over-
7 simplification of the situation. But it's the
8 increased utilization of the steam plant, at least the
9 potential for it, that has Hydro examining the option
10 of natural gas supply rather than oil because it would
11 be lower cost, at least we think it might be lower
12 cost, and it would be easier to deliver in the event
13 that we can get a pipeline built.

14 I believe, without knowing the details,
15 that we are also looking at other options for dealing
16 with that situation, but I don't know what those would
17 be. They might be doing something with the Bruce "B"
18 units, but I don't know that.

19 Q. I can follow that up with Panel 9.

20 A. I think so.

21 Q. Thank you.

22 On page 3 of Exhibit 492 at the top of
23 the page the Bruce Energy Centre is described as a
24 major industrial land development project. I would
25 like to ask some questions as to the extent of it being

1 a major industrial project.

2 Can anyone on the panel state or confirm
3 whether there are four companies operating at the Bruce
4 Energy Centre now?

5 MR. SHALABY: A. That sounds about
6 right.

7 Q. And does anyone know whether these
8 four companies altogether employ about -- or maybe less
9 than 150 people?

10 A. I don't know that.

11 Anybody else?

12 MR. SMITH: A. No, I have no knowledge
13 of that.

14 Q. Going on to how the Bruce Energy
15 Centre came into being, was the Bruce Energy Centre set
16 up in the late 1970s and early 80s to be an example of
17 the great benefits to be gained by cogeneration of
18 steam from nuclear units?

19 A. I don't think any of us have any
20 specific knowledge of that. But my general knowledge
21 would be that might be overstating the case. Although
22 when people make a decision and decide that something
23 has great future benefit, they might attribute all
24 kinds of motives to it.

25 I believe the real motivation was that

1 the steam capability of the reactors was greater than
2 the turbine capacity of the units and therefore there
3 was steam there that would be relatively cheap, it was
4 excess, and therefore to utilize it. The concept of
5 other cogeneration, if you want, facilities or users of
6 that energy would be something worth looking at and
7 developing.

8 [12:36 p.m.]

9 And Mr. Meehan has pointed out that we
10 also reduced our expectations of heavy water
11 production, so in fact, we had planned on using
12 building and using four plants up there. We only
13 operate one now and, therefore, there was excess steam
14 capability within that context as well.

15 So, I think it was to say that the
16 existence of the energy that drove the concept rather
17 than it being driven to prove that cogeneration with
18 nuclear was a particularly attractive option.

19 Q. Okay.

20 A. I guess I would point out that we
21 haven't built any of our other nuclear centres to
22 provide excess steam as a cogenerator since those
23 facilities were built.

24 Q. Okay. Now I am going onto pipeline
25 implications. I am not sure how to phrase this.

1 Is it the panel's position that the
2 consequences of natural gas pipeline right-of-way
3 acquisition, construction, maintenance and operation
4 are not relevant to this hearing? I gather there has
5 been no evidence introduced on the effects of
6 pipelines; is that correct?

7 MR. HOWARD: Well, Mr. Chairman, I would
8 have thought the evidence so far establishes that this
9 is perhaps a gleam in somebody's eye for the future.
10 We didn't introduce the topic obviously. It if
11 proceeds, it will proceed in the normal way, but I
12 don't see how this panel can express an opinion as to
13 whether or not that is relevant to the hearing. I take
14 the position that it is not relevant to this hearing,
15 but I haven't objected to this line of questioning.

16 MRS. MACKESY: Well, I am not speaking
17 just in the context of this particular development but
18 just to the environmental effects of pipelines
19 generally.

20 MR. SMITH: I don't think we have
21 specifically tried to address it or point it out in any
22 of our evidence, but I am aware that any major pipeline
23 has to receive an environmental approval, not
24 necessarily related to this hearing and not necessarily
25 related to an Ontario Hydro facility, but in general it

1 has to receive some kind of approval.

2 MRS. MACKESY: Q. And yet you are
3 implicating the use of natural gas as a fuel for
4 generation?

5 MR. SMITH: A. Yes, and we are for our
6 Lennox Generating Station as well. And I am aware, for
7 instance, in that case, that we would, in fact, need to
8 get an environmental approval for the pipeline even
9 though a large part of the pipeline would go across
10 current Hydro property.

11 Q. Okay. Do you have any comment to
12 make on whether you need environmental approval under
13 the proposal to use the Ontario Hydro transmission line
14 right-of-way?

15 MR. HOWARD: Well, that really is a legal
16 question.

17 MRS. MACKESY: Okay.

18 MR. HOWARD: And if we need it, we will
19 get it or apply for it, perhaps I should say.

20 MRS. MACKESY: I have one more question
21 and this also may be legal. I will just put it on the
22 record anyway.

23 Q. What is the situation for property
24 owners who have leased land to Ontario Hydro for a
25 transmission route - not sold it but leased it - along

1 this type of right-of-way if they object to the
2 right-of-way being used for a natural gas pipeline?

3 MR. HOWARD: Yes, that is a legal
4 question.

5 MRS. MACKESY: Okay, thank you.

6 MR. HOWARD: In my submission.

7 MRS. MACKESY: Now I am going on to the
8 transmission implications of this type of project.

9 Q. Can anyone on the panel explain the
10 transmission implications of the three periods
11 illustrated on page 12, starting at the top with 1991?
12 And I assume that for 1991, it shows 300 megawatts from
13 the Bruce Generation Station and that would just go out
14 over the current transmission lines; would that be
15 correct?

16 MR. SMITH: A. Yes, that's right.

17 Q. Now, going down to 1994, this shows
18 135 megawatts from the NUG development.

19 Can anyone speak to the transmission
20 implications of that?

21 A. I would think that because we only
22 have 2200 megawatts of electricity from the nuclear
23 plants, that there wouldn't be any transmission
24 implication. Other than incorporating the NUG into the
25 grid, there wouldn't be any other transmission problem.

1 Q. And going on to the future where you
2 have a second 135 megawatt NUG?

3 A. It looks like that, based on the way
4 it is described, it would be an on-site use of the
5 electricity.

6 Q. But this is a guess at the moment?

7 A. Yes. We don't really have any
8 further knowledge of that. I think if it was all going
9 off site, we would be now looking at 270 megawatts and
10 I am not aware of what the capacity of an existing line
11 is. It is clearly large enough to take all the output
12 of eight nuclear units, although it wasn't for quite
13 some time. And I don't know whether it would be able
14 to handle a further 230 megawatts without any
15 enhancements.

16 Q. So once all eight units --

17 A. And I wouldn't think anybody here
18 would know that either.

19 MR. SHALABY: A. Not in detail. I think
20 while other generating units are down, which was Mr.
21 Smith's observation, if you have a nuclear unit down,
22 you can perhaps accommodate a NUG. The question is, if
23 you have all the nuclear units up, will you also be
24 able to accommodate additional NUGs?

25 And it would depend on the loading on the

1 system, whether it is peak or off peak, and all the
2 transmission considerations that you probably are
3 better aware than any of us.

4 Q. NUGs 1 and 2, could they be converted
5 into combined cycle plants at a later stage? They
6 would have a much larger size, megawatt size, on the
7 current figures.

8 MR. DAWSON: A. I got the impression
9 from one of the diagrams in here that, in fact, they
10 were combined cycle plant, but I may be mistaken in
11 that, but there was a diagram. It looked extremely
12 complex and not easy to follow.

13 Q. And I certainly wouldn't have been
14 able to follow it.

15 A. This line diagram, this doesn't have
16 a page number on it.

17 MR. SMITH: A. The third page from the
18 back.

19 Q. Oh, yes. I think --

20 THE CHAIRMAN: I have got one marked 15.
21 Is that the one you are thinking of?

22 MR. DAWSON: Yes. It has a C15 on it on
23 the left-hand bottom corner. Over on the left-hand
24 side, it refers to combustion turbines C/W,
25 cogeneration steam turbines, which suggest -- I can

1 interpret C/W as combined with cogeneration steam
2 turbines which would imply it is a combined cycle plant
3 that he has got in mind there, but it is not clear.

4 MRS. MACKESY: Q. Could these be
5 enlarged to much larger facilities? That is what I am
6 getting at.

7 MR. DAWSON: A. If it was combined cycle
8 as opposed to a single gas turbine, it would add about
9 another 50 per cent to the total generation capability.

10 Q. All right. Okay.

11 A. The steam turbine is normally about
12 half the size of the gas turbine.

13 Q. Okay. And could this then go on to a
14 third stage, what you call "integrated gas"?

15 A. You could add a coal gasification
16 plant if the gas prices got high enough and it made it
17 worthwhile to do that.

18 Q. Would that increase the size of the
19 unit?

20 A. It wouldn't affect the size of the
21 generation, no.

22 Q. Now, at the bottom of page 14 in the
23 future section --

24 THE CHAIRMAN: You mean page 12?

25 MRS. MACKESY: I am sorry, page 12, yes.

1 Q. There is a block labelled, "further
2 applications" and I suppose no one on the panel knows
3 what that refers to.

4 MR. SMITH: A. When I was reviewing this
5 before we came in, I wrote down -- I have forgotten the
6 word I wrote down beside it, but I think it is ambition
7 or a dream perhaps, but no, we have nothing specific.

8 I guess they would perhaps envisage that
9 if a gas line was in there and we announce that we
10 would buy lots of non-utility generation over some
11 period in the future, that they would just see the
12 opportunity for further developments, but

13 Q. Further NUG developments, I see.

14 A. I am assuming that is what it refers
15 to.

16 Q. And that could put more pressure on
17 transmission out of the area then?

18 A. Eventually, it would.

19 Q. Okay. I am getting to the end of
20 these questions. And the last ones are on
21 environmental assessments and hearings and I am
22 thinking of the sorts of issues that people might be
23 concerned about such as why new generation is really
24 needed in an area which has such an excess of
25 generation over demand now and about items such as

1 pipeline consequences and what the ultimate
2 transmission would be, requirements would be, and
3 whether this is another attempt to put generation and
4 goodness knows what projects in the country for the
5 benefit of large urban areas.

6 And my ultimate question out of that
7 would be: Would there be environmental assessments and
8 hearings? And I imagine this is another legal
9 question, so I will leave it at that.

10 MR. HOWARD: Mr. Chairman, yes, that
11 position is taken. This obviously is at a very, very,
12 very preliminary stage, so further questions, with
13 respect, would not be helpful.

14 MRS. MACKESY: Those are all my
15 questions, Mr. Chairman.

16 MR. SMITH: Mrs. Mackesy, perhaps I could
17 just add one other point: In your initial
18 interrogatory, you asked about the status of this
19 project.

20 MRS. MACKESY: Q. Yes.

21 MR. SMITH: A. And you didn't ask me
22 again here. And I have found out that we have recently
23 announced that we have changed, at least temporarily,
24 our position on further purchase of non-utility
25 generation because we have a surplus situation and some

1 of the economics are changing.

2 This project, in fact, had been under
3 discussion with our non-utility generation division,
4 but it is one of the projects that was deferred along
5 with some 39 -- I believe there were 40 projects that
6 were sort of under consideration that were deferred and
7 this is one of the ones that has been deferred.

8 Q. Thank you.

9 A. So it is not under active discussion
10 at the moment.

11 MRS. MACKESY: Thank you. Those are all
12 my questions, Mr. Chairman.

13 THE CHAIRMAN: Thank you, Mrs. Mackesy.

14 The next cross-examiner is AECL, won't be
15 here until tomorrow morning. This is the first time I
16 think in the 114 days of hearing that we have been in
17 this situation where the cross-examiners who were
18 supposed to be here are not here.

19 I suppose one way of looking at it, that
20 is pretty good, but on the other hand, it is not
21 something that should be repeated. I repeat that when
22 people are appearing in order, it is impossible to
23 accurately assess the amount of time.

24 Our staff here do the very best they can,
25 but it is really the responsibility of the parties to

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19696	4	It is the annual incidence. s/r <u>For every 19 years.</u>
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1 either, if they can't be here, to put themselves
2 farther down the list by agreement or else make the
3 arrangements to be here when the time comes. We cannot
4 afford in this hearing to have very much down time. We
5 have got a lot of work to do and we must try and do it
6 as quickly as we can.

7 We will adjourn now until tomorrow at ten
8 o'clock.

9 THE REGISTRAR: This hearing will adjourn
10 until ten o'clock tomorrow morning.

11 ---Whereupon the hearing was adjourned at 12:50 p.m. to
12 be reconvened on Thursday, the 27th day of February,
13 1992, at 10:00 a.m.



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